

Section at Stop 10 (US 40), approx. 1.5 mile west of Manhattan T: 10S R: 7E S: 23
 Latitude: 39.167351 Longitude: -96.616486 Elevation (GL): 1165.0 Depth: 59.0

Depth	Stratigraphic Units				Rock Color	Lithology Rock Column	Sedimentary Structures	Fossils	Remarks
	Members	Formations	Subgroup	Stage					
0	Morrill Limestone	Beattie Limestone							27. Limestone tan to brown on fresh surface weathers brown thick-bedded slightly silty medium dense common brachiopod 26. Limestone tan shaly fossil fragments common 1.6
5	Elvira Shale								25. Shale tan to gray-green flaky-bedded calcareous abundantly fossiliferous with <i>Conetes</i> <i>Diphyria</i> <i>Dictyoelostus</i> <i>Juresania</i> <i>Lithoproductus</i> crinoid remains echinoid spines and bryozoans 3.3
10	Cottonwood Limestone								24. Limestone tan to gray on fresh surface weathers tan massive-bedded contains nodular chert with silicified fossils brachiopods crinoid remains echinoid spines but with profusely abundant slender fusulinids many of which weather from rock to give it a
15		Estridge Shale							23. Limestone tan to gray on fresh surface weathers tan 22. Limestone tan to gray on fresh surface weathers tan massive-bedded contains nodular chert with silicified fossils brachiopods crinoid remains echinoid spines impure silty in lowermost 0.5 3
20									21a. Siltstone and shale gray to tan upward bedding indistinct sparse <i>Juresania</i> and other shell fragments in central part 2.7 21b. calcareous siltstone gray to tan upward bedding indistinct. 2.3
25									20. Limestone gray on both 19. Shale gray-green to tan 18. Shale red not bedded silty 17. Shale drab to gray not bedded clayey to slightly silty 1.9 16. Shale red not bedded clayey to silty 1.7
30	Neva Limestone	Grenola Limestone							15. Shale brown to gray upward not bedded clayey 3.14. Shale covered 13. Limestone light gray on fresh surface weathers tan massive bedded medium dense algal in upper part with <i>Chonetes</i> crinoids gastropods and Pelecypods 4.8
35									12. Shale tan flaky-bedded 1.3 11. Limestone brown on both fresh and weathered surfaces thick-bedded impure silty almost earthy contains algae crinoids echinoid spines and fusulinids 3.8
40									10. Shale tan clayey and unbedded in upper 1 foot silty and indistinctly bedded in lower 2.2 feet not bedded and clayey in upper 1 foot unfossiliferous 3.2 9. Shale black flaky-bedded 8. Limestone light gray on fresh surface weathers tan 7. Shale light gray to tan
45									6. Clay light gray not bedded unfossiliferous 1 4. Shale and limestone gray to tan on both fresh and weathered surfaces flaky-bedded calcareous shale and thin-bedded shaly limestone 7
50	Burr Limestone								3. Limestone tan on both fresh and weathered surfaces massive impure silty sparse pelecypods and other shell fragments 5
55									2. Shale dark brown flaky-bedded clayey 1.5 1. Limestone gray-white on fresh surface weathers tan massive bedded shell fragments common 2.2

Primary Rock Lithology

- Clay, Claystone
- Shale
- Silt, Siltstone
- Limestone
- Limestone (massive)

Secondary Rock Lithology

- Clayey, Argillaceous, clay
- Shaly, shale
- Silty, Silt
- fossiliferous
- Calcareous

Fossils

- Fresh Water
- Brackish Water
- Marine
- (F) Few
- (M) Many
- (B) Broken
- Macrofossils
- Brachiopods
- Bryozoans
- Crinoids
- Echinoids
- Gastropods
- Pelecypods
- Algae
- Larger Foraminifera, or fusulin

Sedimentary Structure Symbols

Depositional Structures

- Bedding Base
- Abrupt or sharp, planar base of bed
- Stratification
- Horizontal bedding
- Normal grading/fining upward

Deformational Structures

- Nodules - Silicates